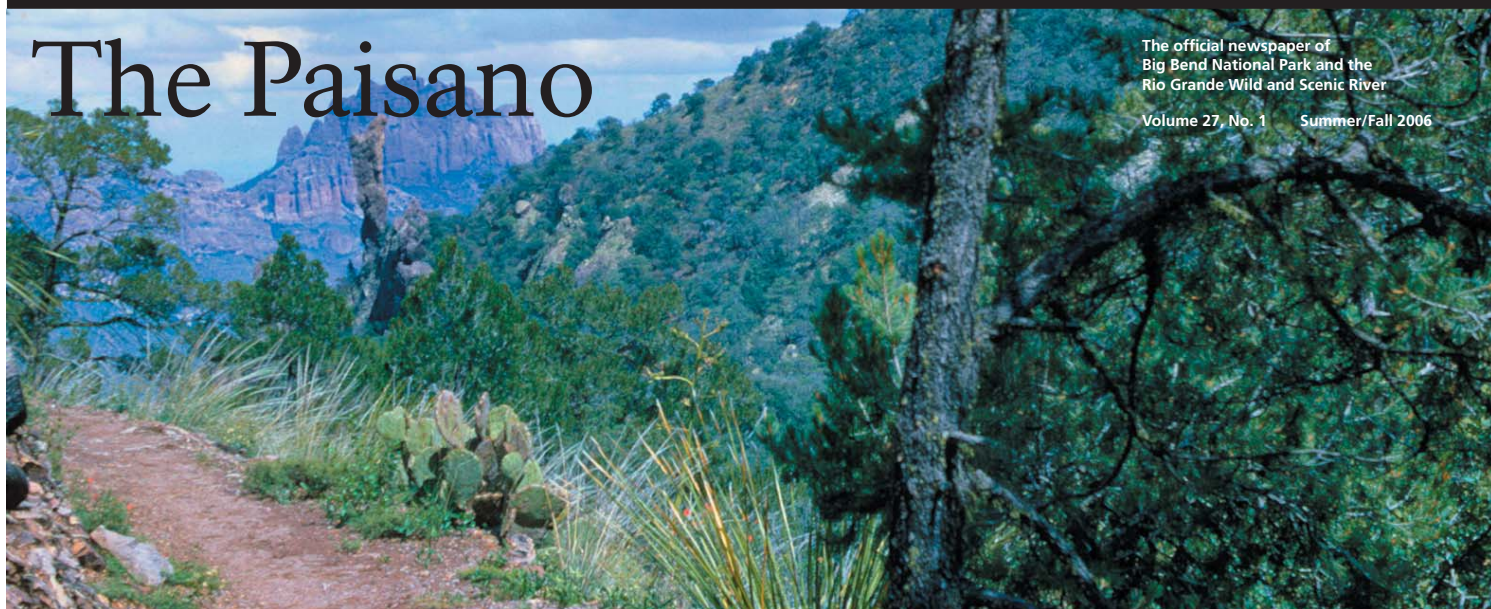




The Paisano

The official newspaper of
Big Bend National Park and the
Rio Grande Wild and Scenic River

Volume 27, No. 1 Summer/Fall 2006



Crown Mountain and The Boot from the Boot Canyon Trail

“An Emerald Isle in a Red Sea”

WELCOME TO BIG BEND NATIONAL PARK AND THE RIO GRANDE WILD and Scenic River! Big Bend is one of the largest and least visited of America's national parks. Over 800,000 acres await your exploration and enjoyment. From an elevation of less than 2,000 feet along the Rio Grande to nearly 8,000 feet in the Chisos Mountains, Big Bend includes massive canyons, vast desert expanses, and the entire Chisos Mountain range.

Here, you can explore one of the last remaining wild corners of the United States, and experience unmatched sights, sounds, and solitude.

This issue of the *Big Bend Paisano* explores the unique environment of the Chisos Mountains. Famed environmental writer Edward Abbey once described the Chisos as “an emerald isle in a red sea,” an apt description of the environment that serves as a high altitude refuge for numerous plant and animal species. Visitors driving into the Chisos Basin experience the transition from the Chihuahuan Desert into a mountain ecosystem. The mountains serve as a year-round attraction, providing unique vistas, challenging hikes, and cooler summer temperatures. During your visit, discover for yourself the allure of the Chisos Mountains.

Superintendent's Welcome

Welcome to Big Bend National Park and the Rio Grande Wild & Scenic River, two of THE most special places administered by the National Park Service. We trust that you will have a wonderful time as you explore and experience these great parks.

Much of this issue of the *Paisano* is devoted to the Chisos Mountains. The southernmost mountains within the United States, the Chisos are like an island, biologically isolated by the surrounding desert. Relict species, such as the Arizona cypress, stand as reminders of cooler climates 10,000 years ago. Black bears and whitetail deer link the Chisos to mountain habitats in Mexico.

Archeological sites, including ranch era structures and prehistoric campsites, attest to the long attraction the mountains have held for human visitors. The Chisos also provide many challenges: lack of water, the return of the black bear, increasing numbers of visitors, and the recent wildfire in the Basin are some of the issues that face park employees now and in the future.

National parks like Big Bend belong to us all, and as such we have a shared stewardship role. Please be mindful of that as you spend time in YOUR national park. Leave only footprints and take only memories. Above all be safe.



John H. King
Superintendent John H. King

Visitor Information

8 What to See & Do

Find out how to make the most of your time in the park. Recommendations and suggested trip itineraries for one day, three day, or week long visits can be found here.

9 Day Hikes

Find descriptions of many of the most popular easy and moderate hiking trails here. A detailed description of each trail includes length, average time required, difficulty, and location.

16 Park Map

Don't know where you are? The park map can help. This page also includes a list of useful phone numbers for services both in and outside the park.

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What is a Paisano?

Paisano is a Spanish word meaning countryman or peasant that is used throughout the American southwest as a nickname for the roadrunner.

Remember:

- The speed limit on all park roads is 45 MPH, unless posted slower.
- Resource collecting is prohibited. Be on the lookout for illegal collecting activities and report suspicious activities to a visitor center, or park ranger.

Emergencies

Call 911 or 432-477-2251 24-hours a day or contact a Park Ranger.



National Park Service
U.S. Department of the Interior

Big Bend National Park

The Big Bend Paisano is published three times a year by the National Park Service and the Big Bend Natural History Association for the orientation and education of visitors to Big Bend National Park and the Rio Grande Wild & Scenic River.

National Park Service

Editor, Eric Leonard, Park Ranger
Chief Naturalist, David Elkowitz
Superintendent, John H. King

The National Park Service was established on August 25, 1916. . . "to conserve the scenery and the natural and historic objects and the wildlife. . . and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." Authorized by congress in 1935, and established in June 1944, Big Bend National Park preserves the most representative example of the Chihuahuan Desert ecosystem in the United States. As conservation educators, the park's Division of Interpretation and Visitor Services provides guided walks, talks, evening slide programs, workshops, and other educational activities as well as written materials such as this newspaper.

Big Bend Natural History Association

Executive Director, Mike Boren
Assistant Sales Manager, Barbara Hines
Visitor Services Assistant, Anita Johnson



The Big Bend Natural History Association, established in 1956 as a private, non-profit organization, champions the mission of the National Park

Service in facilitating popular interpretation of the scenic, scientific, and historic values of Big Bend and encourages research related to those values. The Association conducts seminars and publishes, prints, or otherwise provides books, maps, and interpretive materials on the Big Bend region. Proceeds fund exhibits, films, interpretive programs, seminars, museum activities, and research.

Photograph Credits

When possible *The Paisano* proudly uses photographs of the park taken by visitors and submitted to the website visitor photo gallery. These photographs bear the photographer's name; all uncredited images are NPS photographs.

On matters relating to this publication:

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The National Park Service cares for the special places saved by the American people so that all may experience our heritage.

Big Bend and the Border

Viewing the sun set against the Sierra del Carmen mountains is a sublime Big Bend experience, underlined by the irony that the mountains aren't a part of the National Park; in fact, they aren't even located in the United States. In addition to defining the curve that forms the Big Bend, the Rio Grande also serves as the international boundary between the United States and Mexico. Throughout much of its history the border along the Rio Grande has often been fluid, allowing people of both countries to come and go as needed. However, the border is an artificial boundary imposed on the natural environment, and as such is subject to political and social pressures.

Increased border restrictions following the 2001 terrorist attacks have led to a number of important changes that affect the international boundary in Big Bend. A visit to Big Bend is a wonderful experience to learn about the park's history and to experience a wide variety of natural history and recreation options. The park's border with Mexico is part of our shared landscape and a chance to experience and learn about our neighbors. A few simple steps can help keep the park safe for everyone who is here.

When Visiting A Border Park

Big Bend National Park shares the border with Mexico for 118 miles. This is a remote region. *Visitors should be aware that drug smuggling routes pass through the park.*

If you see any activity which looks illegal, suspicious, or out of place, please do not intervene. Note your location. Call 911 or report it to a ranger as quickly as possible.

Each year hundreds of people travel north through the park seeking to enter the United States. It is possible you could encounter an individual or small group trying to walk through the park with little or no water. Please *do not stop*, but instead, note your location and immediately call 911 or contact a ranger as soon as possible. Lack of water is a life-threatening emergency in the desert.



Sotol walking sticks made in Boquillas, Mexico can now be purchased legally at the Chisos Mountain Lodge, camper stores and the bookstore in the Panther Junction visitor center.

Crossings Remain Closed

As a result of a 2002 US Customs and Border Protection decision, there are NO authorized crossings in Big Bend National Park. *Crossing at Boquillas, Santa Elena, or other locations along the Rio Grande is prohibited.* The closest legal ports of entry are Del Rio and Presidio, Texas.

The U.S. Attorney's Office has indicated that it will prosecute any criminal violations regarding any illegal crossings. If you re-enter the United States at any point within Big Bend National Park, you may be liable for a fine of not more than \$5,000 or imprisonment for up to one year, or both.

Border Merchants

Mexican Nationals may approach you from across the river to purchase souvenir items (walking sticks, bracelets, crafts, etc.). If you agree to look at or purchase their items and the Mexicans cross the river, they may be arrested for being in the U.S. illegally. They will be held until deported back to Mexico through Presidio (100 miles away). Mexican merchants will be arrested for illegal commercial operations which may result in a fine and/or additional incarceration while awaiting adjudication prior to deportation.

Items purchased will be considered contraband and seized by officers when encountered. Rocks, minerals, archeological items, etc. cannot be purchased, imported, or possessed in the national park.

In addition, illegal trade impacts the resources of the park in a number of negative ways, including the creation of social trails, the cutting of cane along the river, erosion of riverbanks and an increased amount of garbage and contaminants along the Rio Grande watershed. Supporting this illegal activity contributes to continued damage of the natural resources along the Rio Grande, and jeopardizes the possibility of reopening the crossings in the future.

Volunteers in the Park

Volunteers are a valuable and valued part of our operation and our community. Last year over 330 volunteers contributed 48,634 hours of service to Big Bend National Park. Some service groups come for a few days, other volunteers stay for months. Some are students, others are retirees looking for adventure during their "golden years."

Most of these volunteers work in visitor centers and as campground hosts; however, volunteers also help in science and resource management, maintenance, and administration. Regardless of age or background, these folks share a desire to make a positive contribution to the preservation and management of Big Bend National Park.

Honor Roll

Join us in thanking the following individuals and organizations who have recently donated 100 or more hours in volunteer service to Big Bend:

Sam Adams
Barbara and Bill Baldwin
Nancy Bauer
Cathy Bell
Marty and Howard Benham
Barbara Bracken
Judy Brinkerhoff
Royann and Royce Brockett
George Bruzenak
Nancy and Ed Bump
Marsha and John Coates
Kay and Doug Combs
Denise and John Curd
John Davies
Sharon and Erwin Drabek
Tina and Steve Ehrman
Lynda and Bob Fanning
Diane and Gary Frable
Bud Frankenberger
Kay and Rich Gordon
Jeanne Griffin
Steve Harper
Ginny and Jim Herrick
Sally and Bob Jones
Mark Kirtley
Joan and Jack Lamkin
Cara Lovell
Susan and Lewis McCool
Sarah McGregor
Christy Moerbe
Gail Munson
Garret Noyes
Dana and Les Over
Glenda and Robert Overfelt
Richard Ranc
Becky Reiger
Chris and Jim Rett
Ronnie Riner
Ingrid and Bernie Sampo
Maaik Schotborgh
Samantha Schroeder
Victoria Summy
Jenette Timmer
Bill Voegtli
Joseph Webb
Ross Weissman
Steve Wick
Bob Wirt



Big Bend Natural History Association



PO Box 196, Big Bend National Park, Texas 79834 432-477-2236 www.bigbendbookstore.org

What is the Big Bend Natural History Association?

The Big Bend Natural History Association (BBNHA) was established in 1956 as a private, non-profit organization. The Association's goal is to educate the public and increase their understanding and appreciation of the Big Bend Area and what it represents in terms of our historical and natural heritage. BBNHA champions the mission of the National Park Service of interpreting the scenic, scientific, and historic values of Big Bend and encourages research related to those values. The Association conducts seminars and publishes, prints, or otherwise provides books, maps, and interpretive materials on the Big Bend region. Proceeds fund exhibits, films, interpretive programs, seminars, museum activities, and research.

The Association's past and present projects include:

- Operate book sales outlets in Big Bend National Park and Amistad National Recreation Area
- Publish trail guides and brochures and assist with the publication of *The Big Bend Paisano*
- Sponsor an on-going Seminar program
- Provide annual grants for research projects and administer grants and gifts received for the park
- Support the park's volunteer, Junior Ranger, and educational outreach programs

Seminars

Spend some quality time with an expert on Big Bend birds, tracks, black bears, dinosaurs, geology, and much more with our Natural History Seminars Program. Now in its 18th year, the immensely popular program sponsored by BBNHA continues to grow and improve.

There are still slots available for the upcoming sessions. Sign up today!

Summer/Fall 2006 Seminars

Sept. 23-24	Birding in Big Bend
Sept. 24	Lodge and learn
October 1	Lodge and Learn
October 7	History on Horseback
October 8	Tracking in the Desert
October 14-15	Backpacking for Women
October 21	When Dinosaurs Ruled
October 28	Desert Survival
October 29	Desert Navigation Skills
November 4	Star Party
November 11	Geology Jeep Tour
November 12	History on Horseback
November 18	Rock in Big Bend
November 19	Large Mammals of Big Bend

Additional information on these seminar schedules is available on the BBNHA website, www.bigbendbookstore.org

Featured Books

Texas Mountains

Joe Nick Patoski and Laurence Parent. This book offers breathtaking views of Texas mountains. With magnificent images and words, journey not only through the familiar Guadalupe, Davis, and Chisos mountains, but also through lesser-known ranges. \$16.95

Hiking Big Bend

Laurence Parent. In collaboration with National Park rangers, Laurence Parent has compiled a comprehensive guide to 44 of the most popular hikes. Photos show terrain and views. Describes difficulty, elevation changes, and maps needed. Also includes three hikes in Big Bend Ranch State Park. \$14.95

Big Bend NP Bird Checklist

Bird Checklist, Big Bend National Park and Rio Grande Wild and Scenic River, Texas by Mark Flippo and Jeffrey M. Selleck. Sixth revision 99¢

A Field Guide to the Birds of Big Bend

Ro Wauer. A where-to-find-what book, not an identification guide. Should be used as a companion to popular field guides. Second Edition. \$18.95

Beneath the Window

Patricia Wilson Clothier. Homer Wilson's daughter grew up, as the title suggests, beneath the Window that drains the Chisos Basin. This is her memoir of the joys and sorrows, the loneliness and the danger, of ranch life in Big Bend in the 1930s and 1940s. \$17.95

General Books

Big Bend: Official National Park Handbook

This full color book gives a brief introduction to the park and its history. It also contains a concise travel guide. \$9.95

Big Bend: The Story Behind the Scenery

General overview of Big Bend's natural features. \$9.95

Big Bend National Park Impressions

Brilliant color photos of the big panoramas and the small gems of the park. \$9.95

Trip Planning and Park Information

Deluxe Trip Planner

Contains the following items: Road Guide, Backcountry Road Guide, Hiker's Guide, Park Handbook, Bird, Butterfly, Invertebrate, Mammal, and Reptile Checklists, Texas Highway Map, Chisos Mountains Trail Map, Terlingua-Chisos Map, and Nature Guide. A \$26.50 value for \$21.50.

Hiker's Guide to Big Bend National Park

Updated in 2005. Covers all major trails in the park, from short self-guiding nature trails to strenuous backpacking routes. \$1.95

Road Guide to paved and improved dirt roads

Describes points of interest visible from all paved and improved dirt roads in the park. \$1.95

Road Guide to backcountry dirt roads

Updated in 2004. Detailed mileage logs of Old Ore Road, Glenn Spring Road and River Road. Good descriptions of historic sites and scenery, human and natural history. \$1.95

Guide Set—Best Value!

Buy all three guides together (hiker's & both road guides) and save! \$5.00

River Guides

Printed on waterproof paper to ensure their longterm usefulness, this guide contains topographic strip maps showing both sides of the river. All rapids and major topographical features are labeled.

General information booklet \$1.00

Vol. 1: Colorado Cyn. to Santa Elena Cyn. \$3.00

Vol. 2: Mariscal Cyn. to Boquillas Cyn. \$3.00

Vol. 3: Lower Canyons to be reprinted in 2006

Maps

Chisos Mountains Trails Map

A topographic map that includes all trails in the Chisos Mountains. Includes trail lengths and descriptions. 99¢

Trails Illustrated Topographic Map

The entire 1,200 square miles of Big Bend NP on one map! Backcountry and day hiking information. Scale 1:133333 \$9.95

Subscribe to The Big Bend Paisano

Keep up with your favorite national park through a subscription to the park newspaper. **Note:** BBNHA Members already receive a subscription to the Paisano. 3 issues per year \$10 (US & Canada) International subscribers \$35

Name: _____

Address: _____

City: _____

State, Zip: _____

Mail check or money order payable to BBNHA.

Detach and mail to:

Big Bend Natural History Association
PO Box 196

Big Bend National Park, Texas 79834



Join Us!

Become a member and create a lasting relationship with Big Bend National Park.

Member Benefits

Membership benefits include a 15% discount in BBNHA bookstores; a 10% discount on most seminars; a subscription to the *Big Bend Paisano*; a current Big Bend calendar; discounts at many other association bookstores in other national park sites; and the opportunity to support scientific, educational and research programs in Big Bend.

Do more with your dues!

Purchase a dual annual membership in both BBNHA and the Friends of Big Bend National Park for only \$100.

Annual Dues

- ☐ Individual \$50
- ☐ Associate \$100
- ☐ Corporate \$200
- ☐ Joint Membership (W/ FBBNP)

Life Membership

- ☐ Individual/Family \$500
- ☐ Corporate \$1000
- ☐ Benefactor \$2500

- ☐ Renewal
- ☐ New Member

Name _____

Address _____

City _____ State _____ Zip _____

Make checks payable to BBNHA or charge to:

☐ Visa ☐ Mastercard ☐ Discover

Card Number _____ Exp. Date _____

Signature _____

Detach and mail to: Big Bend Natural History Association,
PO Box 196, Big Bend National Park, Texas 79834
Telephone: 432-477-2236

You can also join online at www.bigbendbookstore.org

Park News

Mexican Crafts Now Legally Available

Forever Resorts, Inc., and the Big Bend Natural History Association have made arrangements to sell crafts made in Boquillas, Mexico. This enables you to legally purchase goods made in one of the park's neighboring villages. Walking sticks, copper scorpions, and other craft items are now purchased directly from craft artists in Boquillas, Mexico, processed at a legal U.S. Port of Entry, and sold in Big Bend National Park. These items are available at the Panther Junction visitor center, the gift shop at the Chisos Mountains Lodge, or the camp stores at Castolon, Rio Grande Village, or the Basin. All wholesale proceeds go directly to the artisans in Boquillas, Mexico. To help maintain this legal endeavor we once again remind you not to purchase any items from individuals selling crafts along the river or at overlooks.

Project Updates

Groundbreaking is expected on two building projects sometime in 2006; the expansion of the Panther Junction visitor center and a permanent Science and Resource Management facility. The Panther Junction visitor center will be expanded to better accommodate increased visitation. The Science and Resource Management building will provide offices and museum collection storage, and will replace a temporary structure currently in use. Please check at a visitor center for the latest information regarding these projects and possible closures.

Fire in the Chisos Basin

On the afternoon of March 8, high winds caused an electric power pole to break in the Chisos Basin which upon striking the vegetation below ignited a wildfire. The fire began on a northern slope of the Basin near the Campground and was pushed north by high winds. The total acreage of the fire was 37.2 acres. The fire did not reach the top of the ridgeline or threaten the Basin development to the south. Dry conditions have contributed to high fire danger for much of the last year. Please check at a visitor center for the latest information regarding fire danger and possible closures or restrictions.

Windmills Repaired

Over the winter park volunteers Howard and Marty Benham assisted park staff in repairing the windmills at Dugout Wells and the Sam Nail Ranch. The modern windmills at these two locations replicate the role of historic windmills in providing additional surface water for desert plants and wildlife. In a short time, birds and even a black bear had discovered the pool of water at the bottom of the windmill at Sam Nail Ranch! The working windmills at both locations should continue to improve wildlife viewing opportunities and provide a link to Big Bend's ranching past.



Top: The "Telephone Canyone Fire" as seen from the Chisos Basin.

Bottom: Park employee Mark Spurlock and VIP Howard Benham repairing the windmill at the Sam Nail Ranch.

Entrance Fees at Big Bend National Park

Why Do Parks Charge A Fee?

Much of the funding for Big Bend and other national parks comes from American taxpayers. However, protecting this land and ensuring that you have a safe, enjoyable and educational experience costs more than this tax base provides. Therefore, the U.S. Congress determined that people who use federal lands should pay fees to help offset the difference.

Where Does Your Money Go?

Twenty percent of the money collected from entrance and campground fees is redistributed to units of the National Park System that do not charge fees to assist in their upkeep and to upgrade those areas. Eighty percent of the money stays in Big Bend National Park.

How Is Your Money Used?

Your entrance and campground fees help Big Bend National Park complete important projects that directly benefit you and other park visitors.

Recent Projects at Big Bend Made Possible By Your Fees:

- Reconstruction of the Rio Grande Village nature trail boardwalk
- Installation of a toilet at Hot Springs
- Develop a visitor center at Castolon
- Improvements to river access boat ramps

Future Projects:

- Major expansion of the Panther Junction visitor center
- Castolon historic district exhibits

A Ranger Retires

Chief Ranger Mark Spier

The park ranger and horse stop at the top of hill and look east as the Chisos Mountains begin their afternoon transformation to shades and hues of deepening reds and purples. A coyote lopes into an arroyo below. Further to the south, the mountains of Mexico beyond the Rio Grande begin to melt into the late afternoon horizon. Even without the gentle touch of the ranger's boots, the horse knows it is time to start down the hill and toward the end of a long ride.

Ranger Kathi Hambly's long and storied ride as a park ranger at Big Bend National Park is also about to end. The park's West District Ranger will retire from the National Park Service in April, 2006. Ranger Hambly devoted her professional life to protecting the resources and visitors within the park she has called home for over two decades. Her career provides more than enough stories and adventures for several entertaining evenings around a campfire.

As a self-described "Park Service brat," she grew up in national parks around the country and credits her father's career as her

inspiration to join the National Park Service. Kathi began her own NPS career in 1978 as a seasonal park ranger at Wupatki National Monument in Arizona. She accepted a permanent position in resource management at Big Bend in 1979. An interest in law enforcement led Kathi to be hired as Big Bend's first permanent female protection ranger in 1982. Although women are now common in the protection ranger ranks of the Park Service, Kathi was as much a pioneer in the park when she reported to her duty station at Castolon in 1984 as some of the early settlers who preceded her there. She quickly earned her reputation as a "good hand" by meeting all the challenges of life in a remote ranger station hard on the Mexican border.

As a ranger in Big Bend, Kathi responded to hundreds of calls for assistance. She participated in and directed search and rescue missions in the Chisos Mountains, the desert and in the canyons of the Rio Grande. She trained and certified as an Emergency Medical Technician and as both a structural and wildland fire fighter. As a

law enforcement officer, she enforced park regulations, investigated crimes involving park visitors and park resources, educated the public and protected the park "unimpaired for enjoyment of future generations." Kathi is credited with creating the first K9 drug detection program in West Texas. Countless visitors recall meeting Kathi and her drug dog Judge Roy Bean in the park in the 1990's when she not only used the dog as an enforcement tool but also as an education tool and anti-drug ambassador. During their career, they were called upon by agencies all over the region to assist in locating smuggled drugs and the team confiscated over three quarters of million dollars worth of narcotics.

In addition to "protecting the park from the people and the people from the park," Kathi was co-worker, mentor and supervisor to rangers who now serve in national parks all over the country. Known for her strong commitment to the mission of the park service and for her dedication to the ranger profession, she set high standards for others to follow. For that, and for all her work at Big Bend, we thank her and wish her well.



Park Ranger Kathi Hambly prepares to ride off into the sunset.

Sighting the “Big One”

Ranger Angelina Yost

There were two unexpected bonuses that occurred one warm November day when my husband and I, along with two friends, chose to hike up into the Chisos. First, we were delighted to find the maples at peak fall color. For just a few hundred feet in Boot Canyon, I was transported back home to Pennsylvania. There is something about the smell, the multi-color carpet of brilliant colors, and the sound of rustling leaves in a gentle breeze. I couldn't stop taking pictures of the sun's rays glinting on the golds and reds decorating the tops of the trees, or of the mosaic of bright colors blending in with the dull grey tones of rock. I could have spent the entire afternoon under those trees, soaking in the sensation of fall, completely forgetting that we were actually in a desert. Then our reverie was broken.

“Mountain lion, between you and me!”

After living here for six years, driving and hiking all over this park at all times of the day and night, I have only seen a mountain lion once, for seconds, from a car. For many of us, a wildlife sighting does not exactly feel “real” if you see it from the relative safety of your vehicle. It's like seeing a raccoon or javelina raid a trash can. That is not a real “wild” wildlife sighting. The rush, the excitement, the risk is missing. And my first sighting was so short.

Once, we had friends visiting us for just one night. They not only saw a mountain lion, but were able to watch it for several minutes. We were in a car traveling only a few minutes behind them, yet we missed it. I was jealous of visitors, like our friends, who have only been in the park a few hours or days but are fortunate to watch a lion or a bear.

Seeing “charismatic mega-fauna” is the dream of nearly every park visitor. However, out of the approximately 350,000 visitors to Big Bend every year, lately less than 200 sightings of black bears and mountain lions have been reported annually. Looking at monthly statistics from 2004 and 2005, the number of mountain lions spotted ranges from two (11/04 and 9/2004) to eighteen (11/2005). This number does not seem to vary with the seasons. Black bears sightings, on the other hand, are more frequent in the summer (24 in 6/2005).

Although Big Bend's bears do not go through a true hibernation as in the northern states, they do reduce their activity for several months when it gets colder. Fortunately, the vast majority of bear and lion sightings are incident free. But that is not always the case.

On the night of December 29, 1993, at least 10 high Chisos campsites were visited by bears in search of food. Tents were ripped, backpacks destroyed, and fuel and water containers crushed. As a result of this and other similar incidents that year, the National

Park Service initiated a long-term bear management strategy to minimize bear-human conflict. This plan included installing bear boxes at all the campsites in the High Chisos, research into bear behavior, and a strong educational component aimed at preparing visitors. This strategy has been successful since there have not been any such bear “raids” since that winter despite the increasing population of bears in the park.

Interestingly, the bear population appeared to have peaked in June of 2000 with 94 sightings in that month. That was the year that I spotted a mother and two bear cubs while driving up to the Chisos. Mountain lions, on the other hand, are much more secretive and elusive. That same June, there were only 9 mountain lion sightings.

An extended drought, culminating in 2000, caused the death and migration of many of the park's bears. The drought did not seem to have such a dramatic effect on the mountain lion population. As a result, in the last few years, the number of mountain lion and bear sightings has equalized. I had seen four bears in the wild the first few years I worked here, the same years the bear population was at its peak. Now, I really wanted to see a mountain lion.

“Mountain lion, between you and me!” My initial reaction was alarm. How could a large predator suddenly appear between us? My friend who first saw the lion was only about 30 feet down the trail behind us. Reassured that we had safety in numbers, I reached out to my companion standing next to me, making sure she was close by and aware of the sighting. We scanned the area but still could not see it! “Its right there in the wash, walking toward you!” What amazing camouflage! By the time I finally saw it, the lion was not 20 feet away! Mountain lions have leathery footpads that enable them to make a stealthy approach toward prey, obviously including oblivious humans like us. We were so surprised at how this large creature avoided detection despite its proximity. It made us wonder how many other times people must have walked right by a mountain lion completely unaware of its presence.

The lion nonchalantly maneuvered around the rocks in the drainage, watching us watching it. It did not appear alarmed and met our eyes once we were finally able to locate its presence. Not changing its course, it continued down the curve in the drainage that ran along the curve in the trail. There were a few reasons why my initial alarm was not replaced by fear. We had a height advantage. The trail we were on was slightly higher than the drainage and, as the wash curved, the lion followed it and started walking away from us. Also, the lion was not very large, in fact, probably not even 100 pounds. It was not threatening or menacing,

nor even curious about us. We, on the other hand, were awestruck!

My husband was further down the trail by himself. As soon as I was able to spot the mountain lion, I shouted to inform him of the lion's presence. My shouting did not cause the mountain lion to pause, but it did keep an eye on us. Instead of continuing down the wash, it moved to the opposite side of the drainage and crept into a rock overhang. Now a safe distance away, perhaps 100 feet, it paused and watched us. Of course at this point, a little too late, we began scrambling for our cameras. Unfortunately, our documentation just showed up as a nice tan blur.

Keeping a watch over its shoulder, the lion began to scramble up the slope. Since it appeared that the lion would not continue down the wash paralleling the trail, I called out to my husband to hurry back to our location so that he could catch a glimpse of the creature before it disappeared. The lion did scramble up the hill and out of sight only seconds after my husband reached us and got a good look at it.

Perhaps it decided not to hang around with all the noise I was making, or maybe it thought four humans were too many to be near. Or perhaps it just continued on its way, roaming the mountain searching for lunch. As we walked away, we definitely carried with us the message that this mountain was its home, and we were merely visitors.

My friend who originally spotted the mountain lion filed a wildlife sighting card, one of eighteen reports of lions that month, the highest number in a month since March of 2003. If only mountain lions filled out sighting cards for humans! If they kept record, how many “human sightings” would they report a month? The next time you go hiking be aware that, though you may not see them, they may be watching you. So, keep your eyes open, be prepared, and good luck.



A mountain lion peers through the grass.

Fire on the Mountain

Fire Crew Supervisor Gary Luce



On December 9, 2005 at 12:07PM, history was made in Big Bend National Park. The park's Fire Management Program ignited the first large-scale prescribed fire in the Chisos Mountains. Years of planning, careful documentation and surveys for sensitive cultural and natural resources had culminated in the final phases of the Southeast Rim Prescribed Fire Project.

The area to be burned was 350 acres in the area of the Southeast and Northeast Rim. Thirty-six firefighters gathered on that cold morning for a final operational and safety briefing before heading out to the burn unit. After 4 days, 50 acres had been burned along the edges of the unit. Operations were suspended due to weather conditions. Cool temperatures and high relative humidities were not permitting sufficient fire behavior to ignite the interior. A helicopter will be ordered at a later date to ignite the interior with a machine that drops ping-pong ball-like spheres, injected with substances to produce fire and finish the prescribed fire project.

In 1963 the National Park Service officially recognized the essential role that fire plays in ecosystems. Previous to that year NPS policy required that all fires be suppressed. Fire exclusion for nearly 60 years in National Park Service sites had seriously affected the ecology of many areas, and an unhealthy fuel build-up in the form of dead and down wood and thick impenetrable forests was apparent. This build-up of fuels could lead to catastrophic fire that would completely destroy forests and make fires difficult to control, threatening developed areas in national parks.

Fire was heavily suppressed in Big Bend National Park since the Civilian Conservation Corp era of the 1930s and later in the 1940s under NPS management. The park's first fire plan in 1945 stated that every effort would be taken to control any and all small fires. This policy resulted in fuel build-up over the past 100 years. The last known fire in the Chisos Mountains has been documented through oral history and tree ring data and dates back to the early 1900s.

Several scientists are currently studying Big Bend's fire history. Tree rings indicate numerous fires over the past 200 years. Fire return intervals range anywhere from 15 to 70 years. Knowing that fire had been excluded from the Chisos Mountains for nearly a century, park management recognized the need to reintroduce fire into the ecosystem.

Southeast Rim burn objectives are to promote growth grasses and forbs for wildlife, stimulate nutrient cycling, reduce fuels, reduce risk of unplanned high intensity wildfire from damaging natural resources or park development. A final objective is to monitor and document fire behavior and conduct long-term vegetation surveys. This objective will provide future managers with information to assist them in making resource management decisions to protect natural resources and enhance visitor experience in Big Bend National Park.

A Desert Sanctuary

You need to see this place to experience the awesome moment when your heart stands still and your whole body seems to swell—almost to soar. The scene was so unexpected, so spectacular, we gasped as we saw for the first time this view of incredible beauty. As we topped the divide we could look down into a small bowl of a valley. The valley was surrounded by sparsely vegetated mountains spiked with pink rock formations that rose on all sides in rugged spires and cliffs. At the far end of the valley, beyond the winding road, our eyes settled on a cleft in the ring of mountains—the Window—and through this window we could clearly see another world.

Etta Koch, 1945

Big Bend National Park is much more than just a recreational destination. It is a sanctuary of natural and cultural resources—a living museum for all the world. Conserving this heritage is a task the National Park Service cannot accomplish alone. All of us serve a critical role in maintaining Big Bend's sanctuary for the future.



Keep wildlife wild. Human foods are not healthy for wildlife. Feeding wild animals is illegal and can cause injury or death to the animal. Keep food in a hard-sided vehicle or food storage locker where provided.



Please respect the peace and quiet of Big Bend's unique environment and protect the subtle sounds of nature by traveling quietly.



You are an important resource, too. Use common sense and good judgement to protect your own safety and take advantage of our educational programs to enhance your knowledge of Big Bend.



Collecting any natural or historical feature or object is strictly prohibited. Leave the park intact for others to enjoy. If you witness any collecting, report it to a park ranger as soon as possible.



Museum Burns to the Ground

Ranger Dan Leavitt

At 3:00 AM on Christmas Eve in 1941, a fire began to burn the north end of a building in the Chisos Basin. The structure, a small wood-framed L-shaped building, built with boards from the old military barracks in Marfa, burned quickly. According to the night watchman it took only 10 to 15 minutes to consume the structure. At the time there was little that could be done to determine the cause of the blaze. One report stated that the fire may have been set intentionally; another suggested that packrats nesting below the structure might somehow have contributed to the ignition. Regardless of the cause, the loss of the contents held within this structure was monumental, and it still reverberates today.

Built by the Civilian Conservation Corps, that simple building housed the first museum in what would become Big Bend National Park. It held over one thousand catalogued specimens for the proposed park. Visitors could walk in, observe specimens, mainly geological and paleontological in nature, and speak with either the curator or a technician.

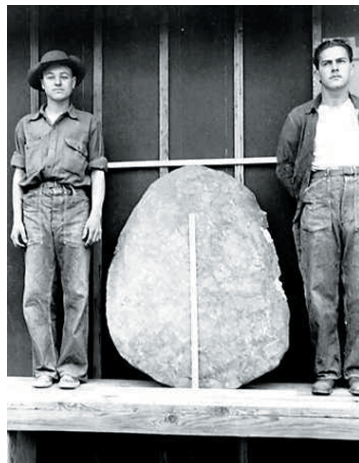
Then junior geologist and curator, later park Superintendent, Ross A. Maxwell reported that all but two percent of the specimens housed in the collection were destroyed by the fire. According to Maxwell, even handling dinosaur bones and other specimens after the fire would cause them to crumble to pieces. Three years of collection, identification, and interpretation, primarily by Maxwell, were lost and there was little left but memories, notes, and a few photographs.

Modern science in Big Bend is still at a loss because of this destructive fire. A few of the fossils housed in this collection were the only ones of their kind found in the region. As an example, today the only evidence of Ice Age creatures existing here is a lone photograph of a fossilized elephant's tooth as it was being exhumed from the ground. The fossil itself was destroyed. While evidence of animals like ground sloths, dire wolves, and cave bears can be found nearby, we can only guess what existed here based upon this lone photograph. If we had the fossil in hand we might be able to gather more evidence of its importance to the paleontological record of Big Bend.

Perhaps what is most unfortunate about this fire was the loss of a visitors' museum in Big Bend National Park. One wonders, if this building had never burned, would the park have expanded this operation? Would we have kept the idea alive as we changed from temporary to permanent structures? More importantly, would we change from temporary to permanent structures?

In an eerily similar event two summers ago, the Science and Resource Management building had a fire start on the north side of the building. Ironically, the building housing thousands of dollars worth of equipment and innumerable amounts of data was also a temporary structure. Fortunately in this case, the park's structural fire crew was on hand and able to contain the fire before it tore through the building.

Yet again, we are reminded of the importance of having secure and lasting collections. Sixty-five years later, Big Bend National Park is working on the plans for a new, permanent structure to house the Science and Resource Management Division. This new structure will provide a secure storage facility for both the invaluable data and the curatorial collection that has been amassed since the loss of the original museum.



CCC enrollees pose with a fossil oyster in front of the museum building. Photo courtesy the NPS Historic Photograph Collection.

Where the Water Comes From

Ranger Bob Hamilton

"Here is no water but only rock"
T.S. Eliot

Water has never been an abundant resource in the Chisos Basin of Big Bend National Park. When looking to establish a Civilian Conservation Corps (CCC) camp in the area in 1934, federal officials had wanted to place the camp and park facilities along the Rio Grande, close to a reliable water supply.

Those familiar with the Big Bend area voiced a reluctance to locate such facilities near the river because the lower elevations become uncomfortably hot during the summer months. In April, 1934, the first efforts were made to locate water in the Chisos Mountains. Wells dug in Green Gulch failed to find water. Finally, on April 16, 1934, water was encountered at a depth of 28 feet in a well north of the present campground in the lower Basin. It appeared that water from this well would be adequate to meet the needs of the CCC camp in the Basin. However, by 1937, it was evident that the water sources in place offered too meager a supply to support the kind of camping, lodging, and park facilities envisioned for the future.

Big Bend National Park was officially established in 1944 and its first headquarters were located in the Chisos Basin. After the CCC departed, the Park Service continued water exploration in hopes of finding a source that would allow the expansion of visitor facilities in the Basin. In 1947, a well was drilled that promised a yield of 25-30 gallons of water per minute, but it failed completely after only four months.

By 1949, the Green Gulch road was paved, and visitors were arriving in ever increasing numbers. Increased visitation presented a demand for water that would soon exceed the scant supply of water. Compounding the problem, the early 1950's marked the beginning of a severe drought. It was obvious that water would have to be supplied by sources located outside the Basin.

Just a little more than three miles west of the Basin and below the Window Pouroff, Oak Spring emerges from the desert surface. Historically, Oak Spring flowed in sufficient quantity to supply the needs of area ranches for over sixty years. If the water from Oak Spring could be transported to the Basin, it would go far toward supplying an adequate supply for visitor facilities in the Basin. And so it was, in 1952, that the current system of water supply to the Basin was created.

Water from Oak Spring is captured and retained in a large storage tank located at the head of Lower Oak Creek directly below the Window Pouroff. From this storage tank, water is pumped two and one-half miles and elevated 1500 feet to a second storage tank

located just south and above the cottages in the Basin. From the upper tank, water is distributed for visitor, concessionaire, and NPS operational usage throughout the Basin.

To this day, Oak Spring remains the sole source of water for all Chisos Basin activities. But can we assume that water issues have been solved for the Basin? To answer this question, one must consider the qualities that define the aquifer that provides water to Oak Spring.

The aquifer itself consists of a narrow, five foot thick sand bed located at a depth of 75 feet and is recharged mainly by precipitation that falls just west of the Basin. Monitored and recorded continuously since December of 1986, the highest recorded spring flow rate in recent times was 109 gallons per minute, and the lowest recorded rate so far has been just 4 gallons per minute, recorded during a severe and persistent drought period.

A spring flow of 20 gallons per minute is considered to be the minimum flow required to meet the water needs of the Chisos Basin. Given the lowest recorded flow rate, it seems quite possible that a period of extended drought could represent a threat to existing Basin activities as the supply of water from Oak Spring could fall below the minimum requirement.

Whether we recreate or work within the magnificent Chisos Basin, it is important that we all understand that water is a precious resource in the Basin just as it is in the more typical "desert" areas of the park. The Chisos Mountain Range is located in the Chihuahuan Desert region of North America, and while increased elevation leads to cooler temperatures and an increase in annual precipitation, it is clear that the geology of the range has limited capacity to retain precipitation after it strikes the ground.

The tale of Oak Spring tells all who spend time within the Chisos Mountains, and the Basin in particular, that we must always observe and exercise water conservation measures. We must limit our use of water to only that which is necessary and we must make every effort to afford protection to surface water wherever it may be found within the range. There are many plants and animals that survive only because they have access to water in the wettest areas of the mountains. Perhaps most important is to be thankful for Oak Springs and the water it provides, allowing all of us to visit one of the most outstanding mountain ranges within the entire national park system.

What to See and Do



You've driven many miles to get here, and have finally arrived at your destination: Big Bend National Park. But now what? Now that you're here, how do you spend your time? Where should you go? What should you explore? The park is big, and often visitors have a limited amount of time to explore.

One Day

If time allows, drive to the **Chisos Mountains** to take in the spectacular mountain views. Walk the 0.3-mile self-guiding **Window View Trail** to get a feel for the mountain scenery.

A trip along the **Ross Maxwell Scenic Drive** will give you a taste of the Chihuahuan Desert and will lead you to the Rio Grande. There are scenic overlooks and exhibits along the way. Sotol Vista, Mule Ears Overlook and Tuff Canyon are all worthwhile stops. The short walks to the Sam Nail Ranch and Homer Wilson (Blue Creek) Ranch and a visit to the Castolon Historic District will give you a glimpse into Big Bend's past.

A highlight is the short walk into **Santa Elena Canyon**—one of Big Bend's most scenic spots. Travel to the end of the Ross Maxwell Scenic Drive to access the trailhead. You may return to the main road by returning on the Ross Maxwell Drive or on the **Maverick Road**, a 13-mile gravel road linking the Ross Maxwell Drive to the Maverick (west) Entrance. Always check on road conditions first.

Three Days

With three days to spend in the park, you can explore the major roads more thoroughly and still have time for hiking. In the Basin area, consider hiking the **Window Trail** (5 miles round trip) or the **Lost Mine Trail** (4.8 miles round trip); consult the *Hiker's Guide to Trails of Big Bend National Park*, for sale in park visitor centers, for trail descriptions.

In addition to the Basin and Ross Maxwell Scenic Drive (see suggestions for "one day") you can drive to **Rio Grande Village**, perhaps stopping at Dugout Wells along the way to walk the short Chihuahuan Desert Nature Trail. The Rio Grande Village Visitor Center offers a brief introductory slide program. Walk the **Rio Grande Village Nature Trail** which begins near site #18 in the campground. The bluff overlooking the Rio Grande at the end of the nature trail is a particularly beautiful spot at sunset.

Boquillas Canyon road will take you to several overlooks of the Rio Grande and the small village of Boquillas, Mexico. At the end of the road is the **Boquillas Canyon Trail**, which takes you to the entrance of this spectacular canyon.

One Week

With a week or more to spend in Big Bend, endless possibilities are open to you. You'll have plenty of time to explore the roads mentioned in the previous sections, and will also have time to hike or to drive some of the "unimproved" dirt roads. For these, you'll need a high clearance or four-wheel drive vehicle; don't forget to check at visitor centers for current road conditions. The River Road, Glenn Springs Road and Old Ore Road are some of the more popular primitive roads. A visit to Ernst Tinaja near the south end of the Old Ore Road is a Big Bend highlight.

If you don't have high clearance or four-wheel drive, gravel roads such as Dagger Flat, Grapevine Hills and Maverick will get you "off the beaten path." Hike the Chimneys Trail, Mule Ears Trail, or Grapevine Hills Trail for a closer look at the desert environment. If you'd like to explore the Chisos Mountains, trails to Boot Canyon, Emory Peak and the South Rim offer good views of the park and take you into another world which seems far removed from the desert. There are plenty of opportunities for overnight backpacking along these trails. A free backcountry use permit is required and can be obtained at park visitor centers.

Floating the Rio Grande

If you have the time and a spirit of adventure, you may want to consider a river trip. Seeing the park's canyons from the middle of the Rio Grande is both fascinating and gratifying. There are many possibilities, from half-day floats to extended seven-day excursions. Park Rangers can recommend a trip that meets your abilities and interests. Rafting and equipment rental companies are listed on page 16.

See "Backcountry Planning" on page 13 for additional information on Big Bend river trips.

Backcountry roads

If you have a high-clearance or four wheel drive vehicle, Big Bend's backcountry roads call for further exploration. There are over 200 miles of dirt roads in the park. Improved dirt roads like the Dagger Flat and Grapevine Hills roads are usually in good condition and accessible to normal passenger vehicles, except following rainstorms. Unimproved dirt roads, such as the Old Ore Road or River Road generally require high-clearance vehicles and/or four wheel drive. Always check current road conditions at a visitor center before traveling and of the park's primitive roads.

Enjoying Your Visit

No matter how limited your time in Big Bend, remember that you will enjoy the park more if you stop your car and explore on foot. That doesn't mean that you have to hike miles on steep grades; there are many short, easy walks and roadside exhibits where you can stretch your legs and enjoy the sights, smells and sounds of the Chihuahuan Desert.

Hiker's guides and road guides are available at book sales areas throughout the park, and they offer more detailed information about Big Bend's trails and roads. Attending ranger-led activities and evening programs are also good ways to learn more about Big Bend; check at the visitor centers and park bulletin boards for current activities.

Remember, you will NOT be able to see everything on this trip. You will probably enjoy the park more if you choose a few spots and explore them thoroughly to get a taste of what Big Bend has to offer. Then, come back again sometime to see the rest!

Blooming yucca



Let's go for a hike!



Along the River Road



Take a Hike on Big Bend Trails

Trail	Trailhead Location	Round Trip (mi/km) (avg. time)		Elevation (ft/m)	Description
Eastside — Panther Junction and Rio Grande Village					
Boquillas Canyon	End of Boquillas Canyon Road	1.4/2.3	1 hour	40/12	Easy Begins with a short climb, then descends via a sandy path to the river. Ends near a huge sand “slide.”
Chihuahuan Desert Nature Trail 	Dugout Wells 6 miles south of Panther Junction	0.5/0.8	1/2 hour	0/0	Easy A flat desert path near a cottonwood oasis. Signs interpret Chihuahuan Desert plant life.
Dog Canyon	3.5 miles south of Persimmon Gap	5.0/8.0	2 hours	60/18	Moderate due to length. Informal hike to a prominent canyon. Requires some modest route-finding.
Grapevine Hills	Grapevine Hills Road mile 7 Usually passable to all vehicles.	2.2/3.5	1 hour	240/73	Easy Follows a sandy wash through boulder field. A short climb at the end takes you to a large balanced rock.
Hot Springs 	End of Hot Springs Road. Unpaved and narrow road.	0.75/1.2	1/2 hour	0/0	Easy Walk past historic buildings to the riverside hot springs. 105°F water. <i>Take a bathing suit and soak a while.</i>
Rio Grande Village Nature Trail 	Rio Grande Village Campground Opposite campsite 18	0.75/1.2	1/2 hour	130/40	Easy Cross a boardwalk to a great view of the river and distant mountains. Good birding and sunrise/sunset views.
The Chisos Mountains					
Basin Loop	Chisos Basin Trailhead (near the Basin Store)	1.6/2.6	1 hour	350/107	Moderate Connects the Laguna Meadow and Pinnacles Trails. Nice views of the Basin area.
Window View  	Chisos Basin Trailhead (near the Basin Store)	0.3/0.5	1/4 hour	0/0	Easy Level, paved, handicapped accessible. Great mountain views. The best place in the Basin to catch sunset through the Window.
Lost Mine 	Basin Road mile 5 (at Panther Pass)	4.8/7.7	3 hours	1100/335	Moderate but steep This trail provides excellent mountain and desert views. Go halfway for a shorter hike.
The Window	Chisos Basin Trailhead or Basin Campground	5.6/9.0 4.4/7.0	4 hours 3 hours	980/299 500/152	Moderate with steep return Descends to the top of the Window pouroff. Great scenery and wildlife viewing. For a shorter hike, start at the Basin campground. Note: Smoking is prohibited on the Window Trail.
Westside — Ross Maxwell Scenic Drive					
Blue Creek Ranch	Ross Maxwell Drive mile 8	0.5/0.8	1/2 hour	90/27	Easy Descends from overlook via old road to 1930s ranch buildings; connects with Blue Creek Canyon & Dodson trails.
Castolon Historic District 	Castolon Historic District Ross Maxwell Drive mile 22	0.5/0.8	1/2 hour	20/6	Easy A short, self-guided walk highlighting the unique history of this border community. Guide booklet also includes a driving tour.
Lower Burro Mesa Pouroff	Ross Maxwell Drive mile 11	1.0/1.6	1/2 hour	60/18	Easy A flat, sandy trail up a canyon to the base of a dry pouroff. Interesting geology and desert plants.
Sam Nail Ranch	Ross Maxwell Drive mile 3	0.5/0.8	1/4 hour	0/0	Easy A loop walk through the remains of a fairly typical 1930s Big Bend area ranch.
Santa Elena Canyon	8 miles west of Castolon	1.6/2.6	1/2 hour	80/24	Easy Crosses creekbed, climbs stairs, then follows the river upstream into the mouth of the canyon. Flash flooding on Terlingua Creek can close this trail.
Tuff Canyon	Ross Maxwell Drive mile 19	0.75/1.2	1 hour	70/21	Easy Balconies overlook this scenic canyon. A short trail leads into and through the canyon itself.
The Chimneys	Ross Maxwell Drive mile 13	4.8/7.7	2 hours	400/122	Moderate due to length. Flat desert trail to prominent rock formations. Look for rock art. No shade.
Upper Burro Mesa Pouroff	Ross Maxwell Drive mile 6	3.6/5.8	3 hours	525/160	Moderate Requires some modest route-finding through washes and narrow gorges to top of the pouroff.
Mule Ears Spring	Ross Maxwell Drive mile 15	3.8/6.1	3 hours	20/6	Moderate A beautiful desert hike to a small spring. Spectacular geology and mountain/desert views.
Looking for more hikes? <i>The Hiker’s Guide to the Trails of Big Bend National Park</i> (\$1.95) contains detailed listings of longer duration hikes and additional trails throughout the park and is available at all visitor center bookstores. Additional guides describing the paved and backcountry roads are also available.					
 = Self-guiding trail  = Handicapped accessible trail					



View from the Colima Trail.

Featured Hike

The Colima Trail: In Search of the Life Bird

Distance: 9 mile (14.5 km) round trip
Elevation: 1250' (381 meters) gain

Each spring, like clockwork, birds arrive in droves in Big Bend. Many stay for a short rest on their flight north, while others arrive for the summer breeding season. Just as predictable are the flocks of bird watchers from all over the globe. The most popular bird that arrives in Big Bend National Park each spring is the Colima warbler (*Vermivora crissalis*). Colimas usually arrive around the third week of April, though they are unaware to their arrival is the condition of their prey. Colimas feed predominately upon oak leaf moth caterpillars, so if you see oak leaves in the higher Chisos, there is a chance that you will find Colimas in the proper places. Colimas are extremely rare in the United States, except in a patch of habitat in the moist canyons of the Chisos Mountains. As a result, Colimas are a sought-after bird for wildlife enthusiasts.

Everybody wants to see one, but there is a catch: finding the Colima is not easy. You have flown and driven for hours, and now that you are here, you will hike for hours to catch a glimpse of this fist-sized ball of feathers. The best place to see and hear Colimas is the Boot Canyon area. The more direct access to Boot Canyon is via the Pinnacles trail from the Chisos Basin Trailhead. The steep four-and-a-half mile climb to Boot Springs on this trail takes most visitors two to three hours.

We recommended that you carry plenty of water in your backpack along with your field guides, snacks, and binoculars. Pinyon, oak, and juniper trees shade the trail to Boot Springs, though it is possible that temperatures in mid April could reach 90° F. Some attempt the hike and plan on turning around after they see their first Colima. Either way, the Boot Canyon area is an amazing place where many other species are likely, such as zone-tailed hawk, Lucifer and blue-throated hummingbirds, Hutton's vireo, and painted redstarts. Get out on the trail and look, listen, and list!

The Night Skies

Ranger Mary Kay Manning

From March through September, the figures in our starry sky will change dramatically. Stars rise and set four minutes earlier each night, which adds up to a full two-hour difference from one month to the next. As the months go by we'll see the bright stars of winter—Orion, the Pleiades, and Sirius—drop further into the west each night, finally disappearing from our view. In the meantime, the constellations of summer—Leo the Lion, Scorpio, and Cygnus the Swan, as well as the bright stars Arcturus and Vega—will rise in the east and slowly progress across the sky.

Some stars and constellations are visible all spring and summer. These are the circumpolar constellations, the ones that move around our celestial north pole. Polaris, a fairly faint star, is roughly aligned with Earth's north pole. From our perspective, Polaris seems to stay in the same location all year long while the other stars appear to move around it. Look for the Big Dipper, Little Dipper, Draco the Dragon, and Cassiopeia in the northern sky. Because Polaris can be difficult to find, it is easier to first locate the Big Dipper – the most prominent pattern in this part of the sky – then use the two pointer stars at the end of the "ladle" to draw a line toward the pole star.

Sirius, in Canis Major, is the brightest star in the night sky through April. Once it sets, orange Arcturus is the brightest star throughout the summer. The first star visible after sunset, it shines directly overhead in June. The light from Arcturus was actually used to open the World's Fair in Chicago in 1933. The 1893 World's Fair had also been held in Chicago, and when astronomers determined that Arcturus was about 40 light-years away, people realized that the starlight they saw during the second fair had left the star during the earlier one. Wanting to commemorate this, they arranged for Arcturus' light to pass through a 40-inch telescope onto a photoelectric cell that generated enough energy to turn on the lights to open the Fair.

While stargazing is certainly more comfortable during the warmer months than in the winter, it also has more challenges, particularly in the Big Bend area. Higher humidity, even in the desert, can make celestial objects appear hazy. Our rainy season begins in mid-summer, so cloudy skies are common. The prevailing summer winds blow in from the east-southeast, carrying pollution from industrial areas, metropolitan areas, and coal-burning power plants in the Ohio River valley, east Texas, along the Texas Gulf Coast, and in northern Mexico. We also face a less dense part of our galaxy this time of year, which means that we see more "dark sky" and fewer bright stars than during the winter. Still, you are likely see more stars on a poor-visibility night in Big Bend than on a clear night elsewhere.

Most park visitors this time of year do their stargazing in the Chisos Basin area, but find that the mountains block their view of the horizons. For a less-obstructed view of the night sky, consider spending an evening in the desert. Dugout Wells and the Rio Grande Village Visitor Center parking lot are ideal places to observe the night sky, as are many of the backcountry campsites. *Camping is not allowed at these parking areas, and you need a backcountry permit to camp at primitive sites.*

Park visitor centers sell several star charts and astronomy books to help you find your way around the night sky.



Pleiades star cluster as viewed from Big Bend.

Birds and Birdwatching

Ranger Mark Flippo

The peak of the spring migration is close at hand, and birds and birders will be descending upon the park in great numbers. Of the nearly 450 species on the official park checklist, almost 190 (42%) are migrants that pass through the region to breeding grounds farther north. Such diversity offers much to those who plan their vacations around the potential for viewing birds.

The annual spring migration begins in late February. Through March and April the number of migrants increases steadily until peaking in the last two weeks of April and the first week of May. In this rush of birds are many neotropical migrants returning from wintering ranges in Latin America. Most pass through, but some remain the summer to nest and raise their young. Among the expected passage migrants comes the occasional rare and accidental species that have wandered off their normal course or are pushing the extreme edge of their normal range. Last spring rarities like least bittern, broad-winged hawk, Cassin's vireo, purple martin, and prothonotary warbler all made appearances in Big Bend.

The summer breeding season offers birders opportunities to find specialty species in Big Bend, including the much-sought *Colima warbler*. In your search for the Colima, keep an eye out for blue-throated hummingbirds, cordielleran flycatchers, and painted redstarts, all possible in the forested canyons of the high Chisos mountains.

Lower in the foothills of the Chisos, *Lucifer hummingbird*, gray vireo and varied bunting are species of note.

If you are limited for time, head to the river. Nearly 75% of all the listed species have been observed in riparian areas. Gray, common black, and zone-tailed hawks are all probable in cottonwood areas along the river during the spring. The diversity of flycatchers there is high, from confusing *Empidonax* species to the unmistakable and eye-stopping vermilion flycatcher, from subtle ash-throated and brown-crested flycatchers to noisy Cassin's, western and tropical kingbirds. The beautiful male painted bunting is most easily seen along the river, as well as the impressive hooded oriole. Whether from a trail or a canoe, birding the river will be productive.

While you are enjoying the birds, keep in mind that many of the migrant species you may observe are members of populations in decline. You can help in several ways: tread softly in fragile habitat and don't damage water sources; don't disturb nesting birds with excessive noise or intrusive attempts at photography. Please share your observations with us, particularly of rare or accidental species. Your detailed report becomes part of the record and can be an aid to researchers. Enjoy the birds of spring, and do all that you can to ensure their return next year.

Colima warbler



Be a Friend to Big Bend

Founded in 1996, the Friends of Big Bend National Park is a private not-for-profit organization with a mission to support, promote, and raise funds for Big Bend National Park in partnership with the National Park Service and other supporters who value the unique qualities of this national resource on the Rio Grande. The Friends of Big Bend National Park has funded a range of critical projects, including wildlife research programs, the purchase of equipment to monitor air and water quality, and the construction and renovation of Park infrastructure.



PO Box 200
Big Bend NP, TX 79834

www.bigbendfriends.org
432-477-2242

Get In On the \$30-Per-Plate Fund Raiser

Big Bend custom plate are now available for your car, truck or motorcycle from the state of Texas and most of the cost will be used to help preserve and protect Big Bend National Park, one of the world's last great wildernesses. It may be the most fulfilling contribution you'll ever make.



Keeping Wildlife Wild



Do Not Feed the Animals.
Not even once. It's bad for them,
they can hurt you, and it's against
the law. Don't touch, don't feed.

Left: It's no laughing matter. Javelina that become habituated to human food become more aggressive. Several visitors are bitten by javelinas each year.

S. Winkler

There really are no problem animals—only problem people. Carelessness can kill. Don't be responsible for the death of a wild animal. Your actions affect both Big Bend's wildlife and future park visitors. With your help, wildlife and humans CAN live safely together in Big Bend National Park.

Mountain Lions

If Big Bend National Park has a symbol, it might well be the mountain lion. Solitary and secretive, this mighty creature is Big Bend's top predator, and is vital in maintaining the park's biological diversity. Everywhere you go in Big Bend, you are in the territory of at least one lion. From mountain to desert, biologists estimate that the park has a stable population of approximately two dozen lions. Within the delicate habitats of the Chihuahuan Desert, mountain lions help balance herbivores and vegetation. Research shows that these large predators help keep deer and javelina within the limits of their food resources. Without lions, the complex network of life in Big Bend would certainly be changed.

Since the 1950s, there have been more than 2,700 recorded sightings of mountain lions by the visiting public within Big Bend National Park. While 90% of sightings are along park roads, observations of lions on park trails also occur. While over 90 percent of these sightings were along park roadways, encounters along trails have also occurred. Since 1985, three lion and human encounters have resulted in attacks on people. In all cases, those attacked recovered from their injuries and the aggressive lions were killed. The more we know about lions, the better able we will be to make life easier for them and for us.

A free informational brochure about mountain lions is available at all visitor centers.



Javelinas

For many visitors to Big Bend National Park, seeing a javelina (hav-uh-LEE-nuh) is a new experience. These curious creatures, also known as collared peccaries, are only found in the United States in Texas, New Mexico, and Arizona. They are covered with black, bristly hairs and generally weigh between 40 and 60 pounds. They usually travel in groups called bands that consist of 10-25 individuals. Peccaries have a highly developed sense of smell, but very poor vision.

Physically, javelinas resemble pigs, but in reality, they are not closely related to pigs at all and have been genetically distinct from them for millions of years.

A javelina's diet includes prickly pear cactus, grasses, mesquite beans, pinyon pine nuts, fruits, berries, and seeds. Unfortunately however, many javelinas now include human food as part of their diet. Every year we are seeing more and more campsites in the park raided by javelina. Although normally not aggressive, they can be when food is involved. Protect yourselves and the javelina by properly storing all your food inside a vehicle or in the food storage lockers provided in the campgrounds. Do not leave coolers or food boxes unattended on picnic tables or in a tent. Flatten tents when you are away from your campsite. It is important that javelinas and all park animals eat their natural food sources to stay healthy and safe. With your help, these unique animals can continue to thrive and thrill park visitors for years to come.



Black Bears

The return of black bears to Big Bend National Park is a success story for both the bears and the park. Native to the Chisos Mountains, bears disappeared from this area during the pre-park settlement era. After an absence of several decades, bears began returning to the park from Mexico in the early 1990s. Today, wildlife biologists estimate that between 12-15 black bears may live in the park.

Black bears are omnivorous; their normal diet is comprised of large amounts of nuts, fruits, sotol and yucca hearts, and smaller quantities of small mammals, reptiles, and carrion.

Bears normally avoid humans, but bears that learn to get food from human sources often become aggressive in their attempts to get more "people" food. Rangers may have to kill bears that lose their fear of people and endanger humans in their attempts to get our food.

Big Bend has made it easy to keep edible items away from bears. Campers at the Chisos Basin Campground, at High Chisos backpacking sites, and at some primitive roadside campsites will find bearproof storage lockers for storing all edibles. Hard-sided vehicles are also suitable for storing edible items. All dumpsters throughout the park are bearproof, as well.

A free informational brochure about black bears is available at all visitor centers.



Please Help

In Developed Campgrounds

- Store food, beverages, trash, toiletries, pet food, and dishes in the bearproof storage locker provided at your site.
- Keep your campsite clean. Take trash and food scraps to a dumpster.
- Dump liquids in restroom utility sinks, not on the ground.
- Ice chests and coolers are not bear-proof; store them in your vehicle.

Cyclists

- Use food storage lockers when provided.

At the Lodge

- Leave nothing outside your room, on the balcony, or on the porch.

In the Backcountry

- Never leave packs or food unattended.
- Avoid carrying odorous food and toiletries.
- Leave excess food and beverages in your trunk or food storage box.
- Carry out all trash, including orange peels, cigarette butts, and left-over food.
- Ice chests and coolers are not bear-proof; store them in your vehicle.

If you encounter a bear or mountain lion:

- Do not run (you may resemble prey).
- Watch children closely and never let them run ahead or lag behind.
- Try to look large. Wave your arms. Throw rocks or sticks at it.
- If attacked, fight back.
- Report any bear or mountain lion sightings or encounters to a park ranger as soon as possible.

Information and Services



Ranger Programs

Join a park ranger for a guided hike, evening slide show, talk, or workshop on Big Bend's natural and cultural history. These free programs are offered daily. Consult the Interpretive Activities Schedule posted on visitor center and campground bulletin boards for more information.

Camper Stores

Forever Resorts Inc., operates camper stores year-round at three locations in the park: Castolon, the Chisos Basin, and Rio Grande Village. Groceries, camping supplies and souvenirs are available in all locations. The gas station at Panther Junction also has a limited selection of groceries.

Banking

There are NO banking facilities in Big Bend National Park. The nearest banking/ATM services are located in Study Butte, 26 miles west of park headquarters. Most stores accept major credit cards; however, some local services accept only cash. It is advisable to have small bills (\$1, \$5, \$10, \$20) since larger bills are often difficult to change.

Lodging

The Chisos Mountains Lodge, operated by Forever Resorts Inc., is located in the Chisos Basin at 5,400 feet elevation. The lodge offers 72 rooms, plus a gift shop and dining room. For reservations or more information, please call (432) 477-2291 or visit their website at www.chisosmountainslodge.com

Gas Stations

Gasoline is available at two locations in the park operated by Forever Resorts Inc. The Panther Junction station offers 24-hour gas pumps with diesel, and can undertake minor repairs. The gas station at Rio Grande Village also provides propane.

Post Office

A full-service Post Office is located at the Panther Junction headquarters, across the porch from the visitor center entrance. A mail drop is also available in front of the Chisos Basin store.

Showers and Laundry

Public showers and laundry facilities are located at the Rio Grande Village store.

Fires

Ground fires and wood fires are prohibited throughout the park. Use only gas stoves or charcoal within a BBQ grill. Pack out all evidence of use, including ash. In the backcountry, charcoal fires are only allowed at roadside campsites and are prohibited in the High Chisos or zone camping areas.

Public Phones / Cell Phones

Public phones are located at visitor centers, campgrounds, camper stores, and the Chisos Mountains Lodge. Limited cell phone coverage is available in the Big Bend area. Do not depend on your phone to work in the Chisos Basin or remote portions of the park.

Recycling

Please use the recycling cans provided in campgrounds, around stores, and near visitor centers. On average, the park recycles around 100,000 pounds of aluminum, cardboard, glass, plastic, metal and other materials each year. Every pound of material that can be recycled means one less pound buried in the park landfill. Please recycle!

Accessibility

All visitor centers are accessible. Wheelchair-accessible campsites and restrooms are located in the Chisos Basin and Rio Grande Village Campgrounds. The Chisos Mountains Lodge restaurant is accessible, as are some motel rooms. A Telecommunications Device for the Deaf is available at park headquarters. Employees with sign language abilities may be available. Some ranger-led programs are also accessible. The Window View Trail is paved and fairly level. A brochure on accessibility is available at all visitor centers.



All trails start here! The Chisos Basin trailhead is located just past the camper store in the Basin.

Camping



Trailers & RVs

All park campgrounds can accommodate trailers and RVs, but vehicle lengths have a great deal to do with safely reaching the campground and finding a suitable space.

The only hookups available in Big Bend National Park are at Rio Grande Village in the 25-site, Rio Grande Village RV Park operated by Forever Resorts Inc. Although there is no size restriction, your vehicle must be equipped with water and electrical hookups as well as a three-inch sewer connection. Register at the store. No advance reservations.

Near the RV park is the 100-site Rio Grande Village Campground operated by the National Park Service. Although there are no hookups, water, flush toilets, and a dump station are available. Set in a large grove of cottonwoods, the campground is adjacent to the Rio Grande. Many of the sites are pull-throughs. Generator use is limited: from 8:00 am to 8:00 pm daily. A no-generator use area is also designated.

The 60-site Chisos Basin Campground is rugged and hilly. The sites are small and most are not suited to recreational vehicles or trailers. The road to the Basin is steep and curvy, especially at Panther Pass—the road's highest point. The road into the campground is a 15 percent grade. Trailers longer than 20 feet and RVs longer than 24 feet are not recommended.

Cottonwood Campground, near Castolon, offers pit toilets and potable water, but no hookups or dump station. Cottonwood is a NO-generator campground.

Big Bend's unpaved roads are generally unsuitable for RVs and trailers. Overnight camping in any primitive site requires a backcountry permit, which can be obtained in person at park visitor centers up to 24 hours in advance.

Tent Camping

The National Park Service operates campgrounds at Rio Grande Village, the Chisos Basin, and Castolon. The cost is \$10.00 per night for a site. Campsite fees can be paid in US currency, personal checks, or credit card.

Camping is also available at primitive backcountry campsites in the Chisos Mountains and along backcountry roads. High-clearance or 4-wheel drive vehicles are necessary to reach most road sites. Backcountry permits are required and can be obtained in person at park visitor centers up to 24 hours in advance.

Camping areas are often full during the Thanksgiving and Christmas holidays, as well as during spring break in March or April.

Campsite Reservations

Forty-three (43) sites at Rio Grande Village campground and twenty-six (26) sites at the Chisos Basin campground are reservable from November 15 to April 15 each year. Visitors may contact ReserveUSA year round to make reservations for the period of November 15 through April 15 of each year. All remaining campsites in these two campgrounds and the entire Cottonwood campground remain on the first-come first-serve basis.

Campsite reservations may be made on-line at www.reserveusa.com, or by calling 1-877-444-6777.

Group Camping

Groups of 10 or more are eligible to reserve a spot in one of the park's Group campsites at the Rio Grande Village, Chisos Basin, and Cottonwood Campgrounds. Group sites are reservable year round and reservations may be made 360 days in advance through ReserveUSA.

Developed Campgrounds at a Glance						
	Elevation (ft/meters)	Sites	Nightly Fee	Facilities	Registration	Comments
Chisos Basin	5,401 / 1,646	60	\$10.00*	Flush toilets, dump station	Self-pay station	Surrounded by rocky cliffs; many hiking trails nearby
Cottonwood	2,169 / 661	31	\$10.00*	Pit toilets, <i>no generator use allowed</i>	Self-pay station	In a cottonwood grove along the river. Grassy sites. Good birding.
Rio Grande Village	1,850 / 564	100	\$10.00*	Flush toilets, dump station	Self-pay station	Largest campground; shady sites. Laundromat and showers nearby.
Rio Grande Village RV	1,850 / 564	25	\$21.00 and up	Full hookups	RGV Camper Store	Concession-operated; adjacent to the RGV store.
* \$5.00 with Golden Age or Golden Access Passport						

Backcountry Planning

Getting a Permit

A free permit is required for all river use, horse use, and overnight backcountry camping, and can be obtained in person only up to 24 hours in advance of the trip. Permits can be written for as many as fourteen (14) consecutive nights in the backcountry. Park staff can assist you with trip planning based on your needs and current trail conditions. Permits can be obtained at all visitor centers during normal operating hours.

Backcountry sites throughout the park are difficult to obtain during the Thanksgiving and Christmas holidays, and during spring break in March and early April.

Plan Ahead

Detailed information on backcountry campsites in the Chisos Mountains and along the backcountry roads are available on the park's website at www.nps.gov/bibe. A wide variety of maps, books, hiking guides and river guides are available for purchase at park visitor centers. If you would like to order them in advance of your trip, call the Big Bend Natural History Association at (432) 477-2236 or visit their online bookstore at www.bigbendbookstore.org.

Backcountry Water

The dry desert air quickly uses up the body's water reserves. Each hiker should carry and drink a minimum of one gallon of water for each day they are in the backcountry. Spigots for drinking water are available at all visitor centers. Big Bend is a desert environment. Springs and tinajas (depressions in rock where water collects) are rare and often unreliable and should be filtered. Every gallon removed from backcountry water sources is one less for the wildlife which depend on them. Please carry enough water to supply your own needs—don't risk your life by depending on desert springs. Caching water is recommended for extended hiking trips in the desert.

Hiking & Backpacking

Big Bend National Park offers over 100 miles of hiking trails in the Chisos Mountains and desert terrain. A free permit is required for all overnight trips in the backcountry. Decide how much distance you want to cover and how much time you have. Desert hiking can be unpleasant or deadly in hotter months.

In the Chisos Mountains, the Southeast Rim Trail and a portion of the Northeast Rim Trail from the Boot Canyon/Southeast Rim junction are closed during the peregrine falcon nesting season (February 1 - May 31).

Zone camping permits are available for those who wish to camp outside of the Chisos Mountains. The park is divided into a number of zones ranging from areas along popular trails to extremely isolated areas.

Horses

Visitors are welcome to bring and use their horses in the park. A free stock-use permit is required and may be obtained in person at any of the park's visitor centers up to 24 hours in advance of the trip. Every horse user should obtain a copy of the regulations regarding use of horses in the park.

While horses are not permitted on paved roads or road shoulders, all gravel roads are open to horses. Cross-country travel is permitted in the park, except in the Chisos Mountains where horse use is limited to the Laguna Meadow, Southwest Rim, and Blue Creek trails. Horses are not permitted in picnic areas, on nature trails, the Santa Elena and Boquillas Canyon Trails, or the Pine Canyon Trail. The Chisos Mountain and Burro Mesa trails are day-use only.

Grazing within the park is not permitted, so you must bring your own feed. Stock may be watered in the Rio Grande and at springs that are not used for domestic water supply. Be prepared to haul water for your stock as springs are unreliable, especially during winter months. Check current spring conditions at a visitor center when you arrive. All horse manure and feed remnants must be removed from the park, or deposited at a designated location near the NPS horse corral at Panther Junction (ask a ranger for directions).

You may camp with your horses at many of the park's primitive road campsites. The Government Springs campsite, located 3½ miles west of Panther Junction, is a primitive campsite with a corral large enough for 6 horses. If you plan to bring horses to the park, you may reserve this campsite up to 10 weeks in advance by calling 432-477-1158.

Backcountry Roads

For those who wish to camp in the backcountry without having to backpack, Big Bend offers over seventy primitive campsites along backcountry roads. Most sites are located in the desert and along the River Road. There are no primitive roadside campsites in the Chisos Mountains. While some sites are accessible to most vehicles, a high clearance and/or four wheel drive vehicle is necessary to reach others. Other than a nice view, isolation, and a flat gravel space, these sites offer no amenities and no shade. There is no charge to use these sites, but a backcountry permit is required.



Floating the Rio Grande

The Rio Grande follows the southern boundary of Big Bend National Park for 118 miles. In this distance it has carved three major canyons, Santa Elena, Mariscal, and Boquillas, which have rapids varying in difficulty from Class I to Class IV. Between the canyons, the river is generally slower-paced. The Rio Grande Wild and Scenic River extends downstream beyond the park boundary for an additional 127 miles.

If you plan to take a river trip in Big Bend National Park, you may bring your own equipment, or you can hire a guide service. Four local companies (see page 16 for telephone listings) provide guide service in the park—you may reserve a trip by contacting them directly.

If you plan to use your own equipment, you must obtain a free permit at a park visitor center. Stop by the Panther Junction Visitor Center for your permit and for current river condition information prior to your trip.

Permits for the Lower Canyons of the Rio Grande Wild and Scenic River may be obtained at the Persimmon Gap Visitor Center (a self-permitting station is available for after-hours use). Permits for floating Santa Elena Canyon may be obtained at the Barton Warnock Center in Lajitas. However, we encourage all parties to get their permits at a park visitor center when possible, to obtain the most up-to-date river information and conditions.



Top: Zone camping along the Dodson trail.

Bottom: Camping along the backcountry roads.



Leave No Trace in Big Bend National Park

Plan ahead and prepare

Big Bend is a land of extremes. Plan on high desert temperatures in the summer with little to no shade; in the winter freezing temperatures are possible in the Chisos Mountains. Schedule your visit to avoid peak season. Visit in small groups. Split larger parties into groups of 4-6. Use a map and compass to eliminate the use of marking paint, rock cairns or flagging.

Travel and Camp on Durable Surfaces

Durable surfaces include established trails and campsites, rock, and gravel. Protect riparian areas by camping at least 100 yards from springs, creek beds, and tinajas. Good campsites are found, not made. While on the trail, walk in single file in the middle of the trail, even when wet or muddy. Keep campsites small. Focus on areas where vegetation is absent.

Dispose of Waste Properly

Pack it in, pack it out. Inspect your campsite and rest areas for trash or spilled foods. Pack out all trash, leftover food, and litter. Deposit solid human waste in cat-holes dug 6 to 8 inches deep at least 1/4 mile from water, camp, and trails. Cover and disguise the cat-hole when finished. *Pack out toilet paper and hygiene products.*

Leave What You Find

Preserve the past. Examine, but do not touch, cultural or historic structures and artifacts. Leave rocks, wildflowers and other natural objects as you find them. Avoid introducing or transporting non-native species. Do not build structures, furniture, or dig trenches.

Minimize Campfire Impacts

Campfires are not allowed in Big Bend National Park. In order to cook foods you may use a backpacking stove, portable fuel stove or the barbecue grills in your campsite.

Respect Wildlife

Observe Big Bend's wildlife from a distance. Do not follow or approach them. Never feed wild animals. Feeding wild animals damages their health, alters natural behaviors, and exposes them to predators and other dangers. Protect wildlife and your food by storing rations and trash securely. Pets are not allowed in the backcountry or on trails. Pets should be on leash and under supervision at all times.

Be Considerate of Other Visitors

Respect other visitors and protect the quality of their experience. Be courteous. Yield to other users on the trail. Step to the downhill side of the trail when encountering pack stock. Take breaks and camp away from trails and other visitors. Let nature's sound prevail. Avoid loud voices and noises.

Pets in the Park



What Not to Do

"I led a bird walk at Rio Grande Village this morning. A woman asked if she and her dog could join our hike. When I told her that she was welcome but the dog was not, she tied the poodle to a picnic table and joined the group. After the hike, as we approached the woman's campsite, instead of finding 'Fifi' yapping away at us, we discovered only its remains. A javelina was just completing a poodle-dinner."

- Ro Wauer
Chief Naturalist, 1970

Pets in a Wilderness Park

Having a pet with you will limit your activities and explorations in the park. In addition, desert temperatures and predators are a serious threat to your pet's well being. Please keep in mind the following points when bringing a pet to the park:

- A National Park is a refuge for the animals and plants living within it. Even if your pet doesn't chase animals, dogs present the image and scent of a historical predator. The result is stress on native wildlife.
- Keep your pet on a leash no longer than six feet in length (or in a cage) at all times. Pets are not allowed on park trails, or anywhere off established roadways. Pets may not be left unattended in the park.
- Pet etiquette and park regulations require that you always clean up after your pet and dispose of waste in trash receptacles.
- Predators such as owls, coyotes, javelina, and mountain lions CAN and DO kill pets here. Even large dogs cannot defend themselves against such predators.

Remember, desert heat is *deadly*. Do NOT leave your pet alone in a vehicle. Pets are not allowed on trails, off roads, or on the river.



Pets are not allowed on trails or in backcountry areas.

The following kennel and veterinary services operate in the greater Big Bend area:

Terlingua Creek Kennels (Oct-April)
Terlingua, TX
(432) 371-2348

Red Woof Inn of the Big Bend
Alpine, Texas
(432) 837-7475

Alpine Veterinary Clinic
Alpine, Texas
(432) 837-3888

Alpine Small Animal Clinic
Alpine, Texas
(432) 837-35416

Big Bend is for Kids

Explore!

Big Bend's habitats range from the Chihuahuan Desert to the Rio Grande to the Chisos Mountains, and all are rich with plants, animals, and stories of human history, giving children plenty of opportunity to explore.

Kids visiting the park enjoy the exhibits and relief map of the park at the Panther Junction Visitor Center, the Fossil Bone Exhibit area, the Hot Springs, the sand dune in Boquillas Canyon, the mountain lion exhibit at the Chisos Basin Visitor Center, and the hands-on exhibits at the Castolon Visitor Center.

Get kids involved in ranger-led programs. These include guided hikes, slide programs, bird walks, and explorations of various park features. Check the schedule at any visitor center to make sure you take advantage of all the available programs. Stop by any visitor center for further suggestions.

Hike a Trail!

Many park trails are suitable for families. Consult the listing of Easy and Moderate Hikes on page 9. For children in strollers, consider the Window View Trail, a paved ¼-mile loop trail that begins at the Chisos Basin trailhead. Remember to watch children closely and never let them run ahead or lag behind.

Be Safe

Be sure to talk to your children about safe behavior before you begin hiking or exploring the park. Require children to walk with adults, rather than by themselves. Keep all your children with you and stand as a group. Desert vegetation can be sharp; have a first aid kit and tweezers handy. Please see page 15 for additional safety information.

Become a Junior Ranger!

Learn desert secrets, identify the parts of a cactus, and discover what javelina eat! The Big Bend Junior Ranger program is designed for kids of all ages. Through activities, games, and puzzles, kids can have fun as they learn about the park. They can also earn a badge or patch, a bookmark, and a certificate.



The Junior Ranger Activity Book costs \$2.00 and is available at all park visitor centers.



Proud Junior Rangers at Rio Grande Village.

The Most Memorable Trail

Park Ranger Doug Thompson

After serving as a national park ranger for thirty-three years (the last four at Big Bend National Park), I will retire from the National Park Service in March 2006. Before I end my official relationship with the Big Bend, however, I want to share my thoughts about one of the greatest trails I've ever hiked—either in or out of the national park system.

Near mile post five on the road into the Chisos Basin, just where the pavement tops Panther Pass, lies the trailhead for the *Lost Mine Trail*. From a paved parking area, the trail ascends gradually beneath the high cliffs of Casa Grande to an overlook in the saddle between Green Gulch and Juniper Canyon. It then climbs steeply to the top of Pine Canyon Ridge—a total of 2 ½ miles—where it offers one of the most spectacular views to be found in any national park.

Over the past four years, I've exercised several times each week by hiking the Lost Mine Trail, which means that I've climbed to the top more than 450 times, traveled approximately 2,250 miles along the way and ascended almost 94 miles! Despite the repetition, I've never regretted my effort or grown tired of the trail's beautiful scenery. In fact, some of my most memorable experiences at Big Bend National Park have occurred along this trail.



Hikers take in the view of the Basin as seen from the top of the Lost Mine Trail.

For instance, I've seen the valley of the Rio Grande and the distant mountains of Mexico awash in the blazing colors and dark shadows of sunset. I've seen cold, gray clouds surging up the steep slope from Green Gulch and whipping over the saddle into Juniper Canyon, only to evaporate as they suddenly encounter warmer air just below the trail.

I've felt the gentle pelting of raindrops during spring showers, and I've climbed cautiously through thick, cold fog after a winter thunderstorm, listening to the muffled, far-away sound of newly-created waterfalls in the canyons below. And I've been cheered by wildflowers growing along the trail and in the meadows—even in December and January! Penstemons, globe mallow, white-eyed flox, Mexican catch-fly and desert verbena have kept me company and raised my spirits many times.

I've also encountered some of the most significant animal residents of Big Bend, including skunks, white-tailed deer, birds, squirrels and even the elusive, mottled rock rattlesnake, with its pink scales. And I've found evidence left by others, including the purple scat of foxes (often positioned on small rocks) and the scat and footprints of black bears and mountain lions.

Every hike has been a challenge, an adventure and an inspiration. In fact, long after I retire, I will remember the *Lost Mine Trail* and the many pleasures it has given me. And if my words prompt *you* to explore the trail as well, then I'll be satisfied to know that it is continuing to serve its purpose—by connecting visitors with the wonderful, awe-inspiring beauty of Big Bend National Park.

Safety is Your Responsibility

Big Bend is unfamiliar country to most visitors yet it need not be dangerous. Whether hiking the highcountry, rafting the Rio Grande, observing wildlife, or simply driving the scenic roads of this wilderness park, let safety be your constant companion. Spend a moment reviewing these common safety concerns so that you may have an enjoyable visit.

Driving

Of the few accidental deaths in Big Bend that occur each year, most result from car accidents. Drive within the speed limit, 45 mph maximum in the park, and watch for javelina, deer, and rabbits grazing along road shoulders, especially at night. Federal regulations require that ALL occupants of a vehicle wear seats belts while in a national park. Remember, too, that you share the road with bicyclists and pedestrians. Some park roads, such as the road into the Chisos Basin, are steep and winding and require extra caution. The Basin Road is not recommended for RVs over 24 feet or trailers over 20 feet. Finally, always select a designated driver before drinking alcoholic beverages.

Poisonous Animals

Venomous snakes, scorpions, spiders, and centipedes are all active during the warmer months. Wear shoes or boots at night instead of sandals. Inspect shoes and sleeping bags or bedding before use and always carry a flashlight at night. While snake bites are rare, they usually occur below the knee or elbow. Pay attention to where you walk and place your hands.

Hiking

Exploring this desert and mountain country on foot requires both mental and physical preparation. Trails vary from well maintained in the Chisos to primitive and barely visible in the desert. Plan hikes within your ability. Take along a map and compass and know how to use them. Flash floods may occur following thunderstorms so avoid narrow canyons or dry washes. Stay low and avoid ridges during thunderstorms. Carry a flashlight and a first aid kit. Let someone know where you're going and when you expect to return. If you get hurt or lost, stay in one place to conserve water and energy. Signal for help; three blasts on a whistle is a well-recognized distress call. In remote areas, a large "X" marked on the ground by any means visible from the air will signify that help is needed. Carry a signal mirror. Remember to obtain a free backcountry use permit before heading out overnight.

Heat

Desert heat can kill you. Carry and drink at least one gallon per person, per day. Wear a hat, long pants, long-sleeved shirt, and sun screen when hiking. Springs are unreliable and often dry up for much of the year. Travel in the early morning or late evening hours rather than during the heat of the day.

Big Bend is wild country. In fact, many people visit precisely because it is so remote and rugged. But remember, as you enjoy the splendor of this great wilderness area, to make safety a priority. By giving forethought to your actions you can have a safe, exciting, and rewarding experience in Big Bend National Park.

Mountain Lions

Big Bend is mountain lion country, especially the Chisos Mountains. While lion attacks are rare, three have occurred in the last twenty years. Should you encounter an aggressive mountain lion, hold your ground, wave your arms, throw stones, and shout. Never run. Keep groups together and consider hiking elsewhere with young children if you come across a special mountain lion warning sign posted at a trailhead.

Desert Wildlife

Black bears, javelinas, skunks, coyotes, and raccoons frequent Big Bend's campgrounds. Although they sometimes appear tame, all of the animals in the park are wild, and could pose a threat to your health and safety if you attempt to approach or feed them. Never feed any of Big Bend's wildlife. To prevent these creatures from becoming habituated to people, store all food, coolers, cooking utensils, and toiletries in a hard-sided vehicle, preferably in the trunk of your car. Food storage lockers are available for hikers and campers in the Chisos Mountains. Dispose of garbage properly in the special animal-proof dumpsters and trash cans provided.

Remember to report all bear or lion sightings to a ranger.

Fire

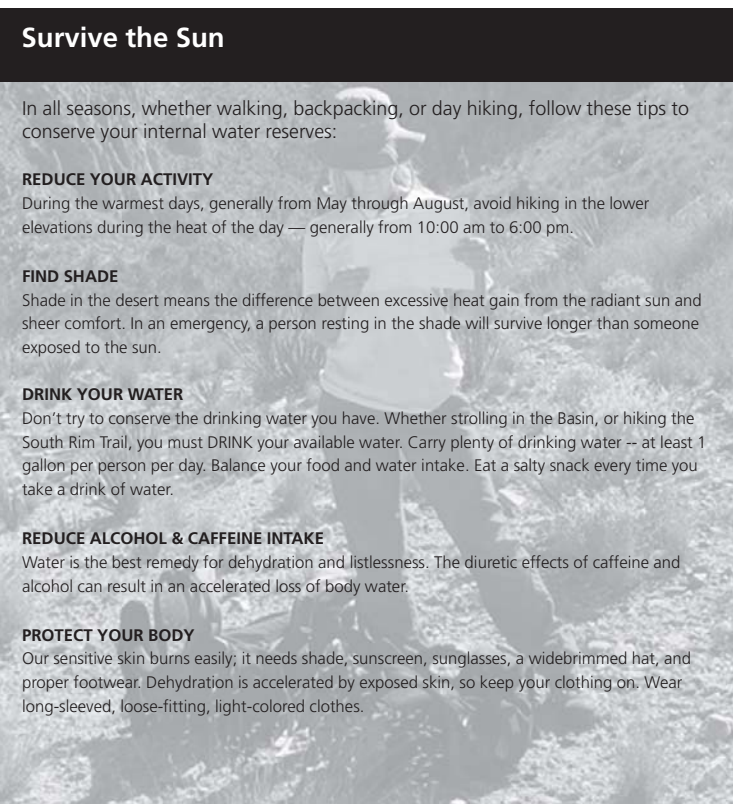
Fire danger is always an important safety consideration in Big Bend. *Wood or ground fires are not permitted in the park*, and you must exercise caution in the use of gas stoves, charcoal grills, and cigarettes. During drought conditions some restrictions may apply to the use of these heat sources. Check with a ranger for the latest information about fire safety in the park.

Swimming

Hot weather makes the muddy Rio Grande look very inviting, but swimming is not recommended. Water borne micro-organisms and other waste materials can occur in the river and cause serious illness. The river can be hazardous, even in calm-looking water. Strong undercurrents, deep holes, and shallow areas with sharp rocks and large tree limbs are common and make the Rio Grande unsafe for swimming. If you do choose to swim, wear a life jacket and avoid alcohol.

If you really want to swim, Balmorhea State Park (three hours north of Big Bend) boasts the "world's largest spring-fed swimming pool." Contact Balmorhea State Park at 432-375-2370 for more information.

Survive the Sun



In all seasons, whether walking, backpacking, or day hiking, follow these tips to conserve your internal water reserves:

- REDUCE YOUR ACTIVITY**
During the warmest days, generally from May through August, avoid hiking in the lower elevations during the heat of the day — generally from 10:00 am to 6:00 pm.
- FIND SHADE**
Shade in the desert means the difference between excessive heat gain from the radiant sun and sheer comfort. In an emergency, a person resting in the shade will survive longer than someone exposed to the sun.
- DRINK YOUR WATER**
Don't try to conserve the drinking water you have. Whether strolling in the Basin, or hiking the South Rim Trail, you must DRINK your available water. Carry plenty of drinking water -- at least 1 gallon per person per day. Balance your food and water intake. Eat a salty snack every time you take a drink of water.
- REDUCE ALCOHOL & CAFFEINE INTAKE**
Water is the best remedy for dehydration and listlessness. The diuretic effects of caffeine and alcohol can result in an accelerated loss of body water.
- PROTECT YOUR BODY**
Our sensitive skin burns easily; it needs shade, sunscreen, sunglasses, a widebrimmed hat, and proper footwear. Dehydration is accelerated by exposed skin, so keep your clothing on. Wear long-sleeved, loose-fitting, light-colored clothes.

Weather and Climate

Weather

Elevational differences in Big Bend mean that temperatures can be vastly different in different areas of the park. The lower areas along the Rio Grande are very hot during the summer months, while the Chisos Mountains are considerably cooler. Winter weather generally occurs between November and February, with temperatures dropping dramatically as cold fronts move through the area. Between June and October thunderstorms and flash floods may occur. Bring clothing for both warm and cool weather, as well as rain gear, when visiting Big Bend any time of the year.

Summer and Fall

Temperatures along the river tend to be the warmest in the park. Plan your activities with the weather in mind; visit the river in the morning, and always carry plenty of water. Higher elevations in the Chisos Mountains lead to lower temperatures. July brings thunderstorms; precipitation can liven up the landscape, but rains havoc on the primitive roads throughout the park.

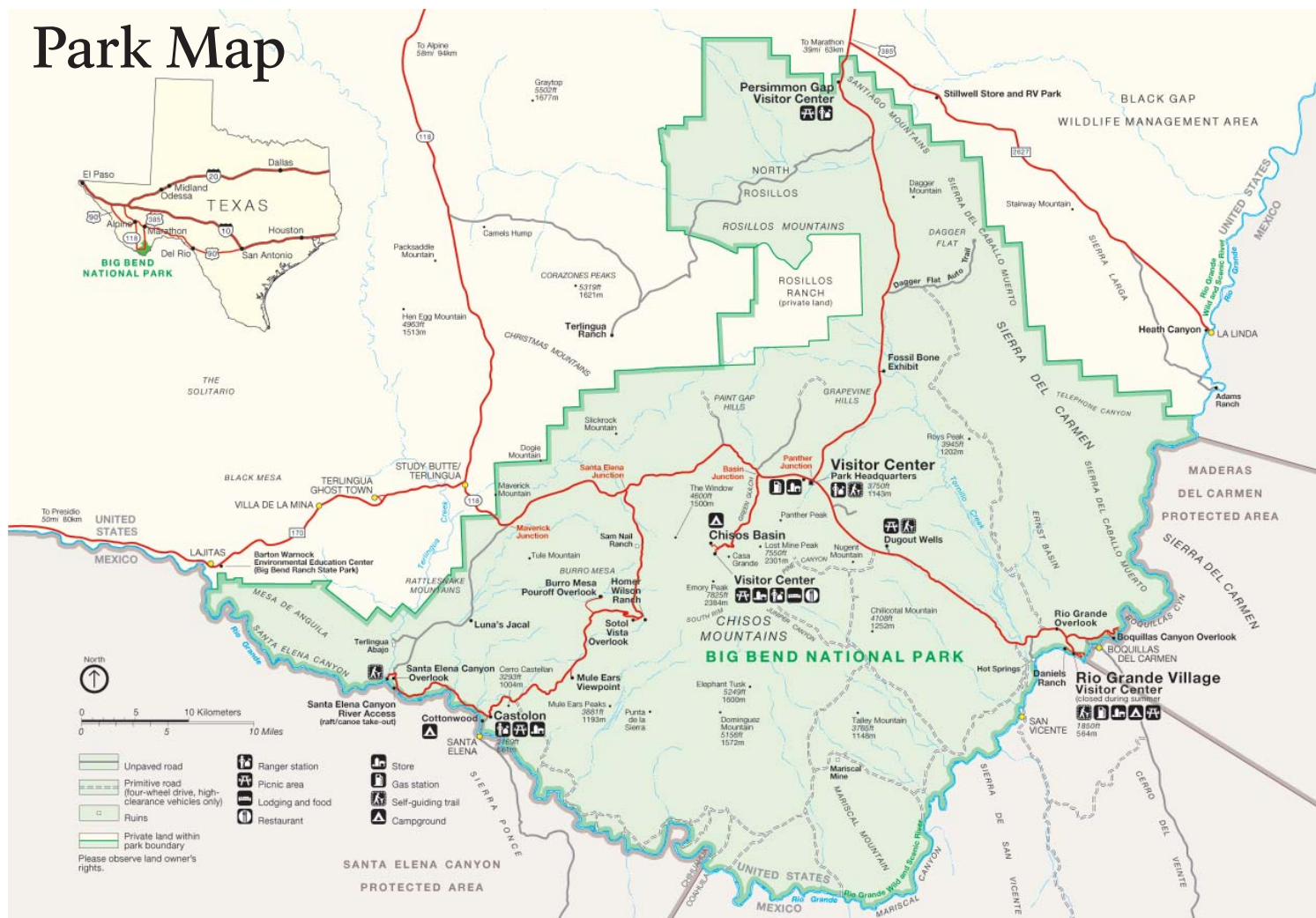
How Hot Is It?

Average temperatures and rainfall at Panther Junction elevation 3,750 feet

	Avg. High/Low	Avg. Rainfall"
January	61/35	.46
February	66/34	.34
March	77/45	.31
April	81/52	.70
May	88/59	1.50
June	94/66	1.93
July	93/68	2.09
August	91/66	2.35
September	86/62	2.12
October	79/53	2.27
November	66/42	.70
December	62/36	.57
Yearly Avg.	79/47	15.34"

Temperatures in the Chisos Basin vary 5-10 degrees below these readings, while daytime temperatures along the Rio Grande average 5-10 degrees warmer.

Park Map



Local Services

Big Bend on the Internet: nps.gov/bibe/

Inside The Park

EMERGENCY

Call 911

National Park Service

General Information 432-477-2251

Big Bend Natural History Association

Booksales & Seminars 432-477-2236

Visitor Centers

Castolon 432-477-2666
Chisos Basin 432-477-2264
Panther Junction 432-477-1158
Persimmon Gap 432-477-2393
Rio Grande Village 432-477-2271

U.S. Post Office

Panther Junction 432-477-2238

Lodging / Restaurant

Chisos Mountains Lodge 432-477-2291
432-477-2292

Park Gasoline Service

Panther Junction (also diesel) 432-477-2294
Rio Grande Village 432-477-2293

Campground Stores

Rio Grande Village 432-477-2293
Chisos Basin 432-477-2291
Castolon 432-477-2222

Outside The Park

Lodging

Lajitas Resort, Lajitas 877-525-4827
Big Bend Motor Inn, Study Butte 800-848-2363
Easter Egg Valley Motel, Study Butte 432-371-2254
El Dorado Motel, Terlingua 432-371-2111
Gage Hotel, Marathon 432-386-4205
Heath Canyon Ranch Inn, FM 2627 432-376-2235
Longhorn Ranch Hotel, Hwy. 118 432-371-2541
Marathon Motel, Marathon 432-386-4241
Ten Bits Ranch, Terlingua 866-371-3110
Terlingua Ranch Resort 432-371-2416

Camping

Big Bend Motor Inn, Study Butte 800-848-2363
Big Bend Ranch State Park, Lajitas 432-424-3327
Big Bend Travel Park, Study Butte 432-371-2250
Heath Canyon Ranch, FM 2627 432-376-2235
Longhorn Ranch, Study Butte 432-371-2541
Stillwell's Trailer Camp, FM 2627 432-376-2244
Study Butte RV Park 432-371-2468
Terlingua Ranch Resort 432-371-2416

Convenience Stores/Gasoline

Big Bend Motor Inn (gas/diesel) 800-848-2363
Lajitas Trading Post (gas/supplies) 432-424-3234
Study Butte Store (gas/diesel/groceries) 432-371-2231
Stillwell Store & Station (gas) 432-376-2244

Medical Services

Terlingua Medics 432-371-2536
Lajitas Infirmary 432-424-5111
Big Bend Regional Medical Center, Alpine 432-837-3447

Banks

Quicksilver Bank & ATM, Study Butte 432-371-2211

Rio Grande Float Trip Outfitters/Rentals/Guide Services

Big Bend River Tours, Study Butte 800-545-4240
Desert Sports, Terlingua 888-989-6900
Rio Grande Adventures, Study Butte 800-343-1640
Far Flung Outdoor Center, Study Butte 800-839-7238

Horseback Riding

Big Bend Stables, Study Butte & Lajitas 800-887-4331

The facilities and services listed here are located within the greater Big Bend area, and vary from 30 to 100 miles from Big Bend National Park. The communities of Terlingua/Study Butte (30 miles west) and Marathon (70 miles north) offer basic services, including gas stations, restaurants, lodging, and campgrounds. Alpine, 90 miles to the northwest of the park, is the largest community and offers the greatest number of services.

This listing of local services is a courtesy to our visitors and implies no endorsement by the National Park Service or Big Bend National Park.